Format No: CP/TF/01

TEST REPORT ON BITUMEN

Lab ID	:	CP-2017-10-05-01 **Date: 06-10-17**
Customer	:	Assistant Executive Engineer, Shettyhalli Sub Division, BBMP, Bangalore.
Address	:	Shettyhalli Sub Division, BBMP, Bangalore.
Project Name	:	Improvements of Asphalting of Ravindranagara 3rd Main road and other roads in Ward No.13. Shettyhalli Sub Division.
Agency	:	Sri. G. N. Ramesh, No.01, 3rd Main, Gandhi Grama, 7th Cross, Maruthi Extension, Bangalore-560021
Customer's Reference	:	EE/DD/WO/368/2014-15
Source of Sample	:	Sample supplied by Agency
Sample Condition	:	Satisfactory
Date of Receipt	:	05-10-17
Sample ID No	:	2017-10-05-01/01
Sample Type	:	Bitumen
Reference to BIS codes	:	IS: 1201-1220(1978) (Reaffirmed-2004)
Date of test	:	05-10-17

Test Results

Sl.no	Name of Test	Result	Requirements as per IS:73-2013
1	Penetration at 25°C , in 1/10th mm	66	60 to 70
2	Softening Point, °C	48.6	Min. 40°C
3	Ductility, cm	95	Min. 75cm
4	Flash point, °C	235	Min. 220°C
	Fire point, °C	260	

Note:
The results pertain to the samples received and tested.
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Authorized Signatory
Quality Manager

****End of Report****

PHYSICAL REQUIREMENTS FOR COARSE AGGREGATE FOR BITUMINOUS CONCRETE

Lab ID	:	**CP-RW-2017-10-09-01** **Date: 12-10-17**
Customer	:	Assistant Executive Engineer, Shettyhalli Sub Division, BBMP, Bangalore.
Address	:	Shettyhalli Sub Division, BBMP, Bangalore.
Project Name	:	Improvements of Asphalting of Ravindranagara 3rd Main road and other roads in Ward No.13. Shettyhalli Sub Division.
Agency	:	Sri. G. N. Ramesh, No.01, 3rd Main, Gandhi Grama, 7th Cross, Maruthi Extension, Bangalore-560021
Customer Reference	:	EE/DD/WO/368/2014-15
Source of Sample	:	Sample supplied by Agency
Sample Condition	:	Satisfactory
Date of Receipt	:	09-10-17
Sample ID No	:	2017-10-09-01/01
Type of Mix	:	BC (Bituminous Concrete)
Date of test	:	09-10-17

Table 500-16 : Physical Requirements fo Coarse Aggregate for Bituminous Concrete

Property	Test	Result	Specification	Method of Test
Partical Shape	Flakiness Index	8.49	Combined Flakiness & Elongation Index for BC is Maximum 35%	IS:2386 Part I
	Elongation Index	11.53		
Strength	Aggregate Impact Value	22.15	Maximum 24%	IS:2386 Part IV
Specific gravity	Specific gravity	2.60	Maximum 2.7	IS:2386 Part III
Water Absorption	Water Absorption	1.28	Maximum 2%	IS:2386 Part III

Note:

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ಶೆಟ್ಟಿಹಳ್ಳಿ ಉಪವಿಭಾಗ, ಬಾಗಲಕುಂಟೆ ವಲಯ
ಬೃಹತ್ ಬೆಂಗಳೂರು ಮಹಾನಗರ ಪಾಲಿಕೆ
ಎಸ್.ಎಂ. ರಸ್ತೆ, ರವೀಂದ್ರನಗರ, ಬೆಂಗಳೂರು

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DETERMINATION OF FLAKINESS INDEX AND ELONGATION INDEX OF COARSE AGGREGATE(IS 2386 (Part 1) 1963 (RA 2007)

Lab ID	:	**CP-RW-2017-10-02-01** **Date: 04-10-17**
Customer	:	Assistant Executive Engineer, Shettyhalli Sub Division, BBMP, Bangalore.
Address	:	Shettyhalli Sub Division, BBMP, Bangalore.
Project Name	:	Improvements of Asphalting of Ravindranagara 3rd Main road and other roads in Ward No.13. Shettyhalli Sub Division.
Agency	:	Sri. G. N. Ramesh, No.01, 3rd Main, Gandhi Grama, 7th Cross, Maruthi Extension, Bangalore-560021
Customer Reference	:	EE/DD/WO/368/2014-15
Source of Sample	:	Sample supplied by Agency
Sample Condition	:	Satisfactory
Date of Receipt	:	02-10-17
Sample ID No	:	2017-10-02-01/01
Type of Mix	:	Coarse Aggregate for WMM (Wet Mix Macadam)
Date of test	:	02-10-17

Result:

Index	Percentage of Flakiness and Elongation Index	Secified limits as per MORTH specification table 400-12
Flakiness Index	18.06%	Combined Flakiness & Elongation Index for WMM is Maximum 35%
Elongation Index	12.40%	
Combined Flakiness and Elongation Index for WMM	30.5%	

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TEST RESULTS OF GRADATION FOR WMM

Lab ID	:	CP-RW-2017-10-02-01 **Date: 04-10-17**
Customer	:	Assistant Executive Engineer, Shettyhalli Sub Division, BBMP, Bangalore.
Address	:	Shettyhalli Sub Division, BBMP, Bangalore.
Project Name	:	Improvements of Asphalting of Ravindranagara 3rd Main road and other roads in Ward No.13. Shettyhalli Sub Division.
Agency	:	Sri. G. N. Ramesh, No.01, 3rd Main, Gandhi Grama, 7th Cross, Maruthi Extension, Bangalore-560021
Customer Reference	:	EE/DD/WO/368/2014-15
Source of Sample	:	Sample supplied by Agency
Sample Condition	:	Satisfactory
Date of Receipt	:	02-10-17
Sample ID No	:	2017-10-02-01/02
Type of Mix	:	WMM (Wet Mix Macadam)
Date of test	:	02-10-17
Oven Dry Weight	:	10000 Grams

IS Sieve Size(mm)	Weight Retained (gm)	Cumulative Weight Retained (gm)	% Cumulative Weight Retained	% Passing	Spec.I.Vide Table 400.13 MORTH Specification
53	0	0	0.0	100.0	100
45	500	500	5.0	95.0	95-100
22.4	1800	2300	23.0	77.0	60-80
11.2	2900	5200	52.0	48.0	40-60
4.75	1300	6500	65.0	35.0	25-40
2.36	1100	7600	76.0	24.0	15-30
0.6	1500	9100	91.0	9.0	8-22
0.075	800	9900	99.0	1.0	0-5

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TEST REPORT OF AGGEGRATE STRIPPING VALUE OF ROAD AGGRGATE (IS:6241)

Lab ID	:	**CP-RW-2017-10-09-01** **Date: 12-10-17**
Customer	:	Assistant Executive Engineer, Shettyhalli Sub Division, BBMP, Bangalore.
Address	:	Shettyhalli Sub Division, BBMP, Bangalore.
Project Name	:	Improvements of Asphalting of Ravindranagara 3rd Main road and other roads in Ward No.13. Shettyhalli Sub Division.
Agency	:	Sri. G. N. Ramesh, No.01, 3rd Main, Gandhi Grama, 7th Cross, Maruthi Extension, Bangalore-560021
Customer Reference	:	EE/DD/WO/368/2014-15
Source of Sample	:	Sample supplied by Agency
Sample Condition	:	Satisfactory
Date of Receipt	:	09-10-17
Sample ID No	:	2017-10-09-01/01
Type of Mix	:	BC(Bitumenous Concrete)
Date of test	:	09-10-17

Type of Binder	:	60/70
% of Binder Used	:	5.0%
Weight of Aggregate	:	200.0 gm
Weight of Binder	:	10.0 gm
Temperature of water bath	:	40°C

No of test	Retained Stripping Percentage	Stripping Percentage	Average Retained Stripping Percentage	Secified limits as per MORTH specification table 500-8
1	96.1	3.9	97.0	Minimum Retained Coating 95%
2	97.8	2.2		
3	97.2	2.8		

Note:
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TEST RESULTS OF GRADATION FOR BC
IS 2386 (Part 1) 1963 (RA 2011)

Lab ID	:	CP-RW-2017-10-13-01	**Date: 15-10-17**
Customer	:	Assistant Executive Engineer, Shettyhalli Sub Division, BBMP, Bangalore.	
Address	:	Shettyhalli Sub Division, BBMP, Bangalore.	
Project Name	:	Improvements of Asphalting of Ravindranagara 3rd Main road and other roads in Ward No.13. Shettyhalli Sub Division.	
Agency	:	Sri. G. N. Ramesh, No.01, 3rd Main, Gandhi Grama, 7th Cross, Maruthi Extension, Bangalore-560021	
Customer Reference	:	EE/DD/WO/368/2014-15	
Source of Sample	:	Sample supplied by Agency	
Date of Receipt	:	13-10-17	
Sample ID No	:	2017-10-13-01/01	
Type of Mix	:	BC (Bituminous Concrete)	
Date of test	:	13-10-17	

Sl.no	Description	Index	Trail 1	Trail 2
1	Weight of the Sample	A	505	505
2	Weight of the sample After extraction	B	473	472
3	Bitumen percentage	$\frac{A-B}{A} \times 100$	6.34	6.53
4	Average percentage	%	6.4	

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